

## SEQUENCE LISTING

<110> DeVries, Peter J.  
 Green, Larry L.  
 Ostrow, David H.  
 Reilly, Edward B.  
 Wieler, James

<120> Erythropoietin Receptor Binding  
 Antibodies

<130> 6989.US.02

<150> 10/269,711

<151> 2002-10-14

<160> 115

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 30

<212> PRT

<213> Homo sapiens

<400> 1

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			20					25					30		

<210> 2

<211> 349

<212> DNA

<213> Homo sapiens

<400> 2

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acctgcactg	tctctggtgc	ctccatcagt	agttactact	ggagctggat	cgggcagccc	120
ccagggaagg	gactggagtg	gattgggtat	atctattaca	gtgggagcac	caactacaac	180
ccctccctca	agagtcgagt	caccatatca	gtagacacgt	ccaagaacca	gttctccctg	240
aagctgaggt	ctgtgaccgc	tgcggacacg	gccgtgtatt	actgtgagag	agagcgactg	300
gggatcgggg	actactgggg	ccaaggaacc	ctggtcaccg	tctcctcag		349

<210> 3

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3

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Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Ala	Ser	Ile	Ser	Ser	Tyr
			20					25					30		
Tyr	Trp	Ser	Trp	Ile	Arg	Gln	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	
		35					40				45				
Gly	Tyr	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys

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      50              55              60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65              70              75              80
Lys Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
      85              90              95
Arg Glu Arg Leu Gly Ile Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val
      100              105              110
Thr Val Ser Ser
      115

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<210> 4
<211> 322
<212> DNA
<213> Homo sapiens

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atcacttgcc gggcaagtca gggcattaga aatgatttag gctggatatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatactt accctccgac gttcggccaa 300
gggaccaagg tggaaatcaa ac                                     322

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<210> 5
<211> 107
<212> PRT
<213> Homo sapiens

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<400> 5
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1              5              10              15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ar g Asn Asp
      20              25              30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
      35              40              45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
      50              55              60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65              70              75              80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Th r Tyr Pro Pro
      85              90              95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
      100              105

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<210> 6
<211> 370
<212> DNA
<213> Homo sapiens

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ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaataga acagcctgag agttgaggac acggctgtgt attactgtgc gagagatcac 300
ggtggggaggc acgtctacga ctacgggatg gacgtctggg gccaaaggac cacggtcacc 360
gtctcctcag                                     370

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<210> 7  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 7  
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 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg Asp His Gly Gly Arg Tyr Val Tyr Asp Tyr Gly Met Asp Val  
 100 105 110  
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
 115 120

<210> 8  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

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 atcacttgtc gggcgagtca ggggtattagc agctgggttag cctgggtatca gcagaaacca 120  
 gggaaagccc ctacgctcct tatctatgct gcatccactt tgcaacgtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240  
 gaagattttg caacttactt ttgtcaacag gctaacagtt tcccattcac tttcggccct 300  
 gggaccaaaag tggatatcaa ac 322

<210> 9  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 9  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Ile Gly  
 1 5 10 15  
 Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp  
 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Thr Leu Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Thr Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe  
 85 90 95  
 Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys  
 100 105

<210> 10  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<400> 10  
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 tcctgtgcag cctctggatt caccttcagt agcta tggca tgcactgggt cgcgccaggct 120  
 ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatac acagcctgag agttgaggac acggctgtgt attactgtgc gagagatcac 300  
 ggtgggaggt acgtctacga ctacgggtatg gacgtctggg gccaaaggac cacgggtcac 360  
 gtctcctcag 370

<210> 11  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg Asp His Gly Gly Arg Tyr Val Tyr Asp Tyr Gly Met Asp Val  
 100 105 110  
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  
 115 120

<210> 12  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 12  
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 atcaactgtc gggcgagtca ggggtattagc agctgggttag tctgggtatca gcagaaacca 120  
 gggaaagccc ctgcgctcct aatctatgct gcatccagtt tgcagcgtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagac ttcactctca ccatcagcag cctgcagcct 240  
 gaagattttg caacttactt ttgtcaacag gctaacagtt tccatttcac tttcggccct 300  
 gggaccaaaag tggatatcaa ac 322

<210> 13  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 13  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly

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Asp	Arg	Val	Ser	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Gly	Ile	Ser	Ser	Trp
			20					25					30		
Leu	Val	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Ala	Leu	Leu	Ile
		35					40					45			
Tyr	Ala	Ala	Ser	Ser	Leu	Gln	Arg	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75				80	
Glu	Asp	Phe	Ala	Thr	Tyr	Phe	Cys	Gln	Gln	Ala	Asn	Ser	Phe	Pro	Phe
				85					90					95	
Thr	Phe	Gly	Pro	Gly	Thr	Lys	Val	Asp	Ile	Lys					
			100					105							

<210> 14  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<400> 14  
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 ccaggcaagg ggctggagtg ggtggtagtt atatca tatg atggaagtaa taaatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatac acagcctgag agttgaggac acggctgtgt attactgtgc gagagatcac 300  
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 gtctcctcag 370

<210> 15  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

Gln	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg
1				5				10					15		
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr
		20						25				30			
Gly	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35				40					45				
Val	Val	Ile	Ser	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Asp	Ser	Val
		50				55				60					
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65				70				75					80		
Leu	Gln	Met	Asn	Ser	Leu	Arg	Val	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Arg	Asp	His	Gly	Gly	Arg	Tyr	Val	Tyr	Asp	Tyr	Gly	Met	Asp	Val
		100						105				110			
Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser					
		115				120									

<210> 16  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 16

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 atcacttgtc gggcgagtc ggggtattag agctgggttag c ctgggtatca gcagaaacca 120  
 gggaaagccc ctacgctcct aatctatgct gcatccagtt tgcaacgtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagat ttactctca ccatcagcag cctgcagcct 240  
 gaagattttg caacttactt ttgtcaacag gctaacagtt tcccattcac tttcggccct 300  
 gggaccaaag tggatatcaa ac 322

<210> 17  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 17  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp  
 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Thr Leu Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe  
 85 90 95  
 Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys  
 100 105

<210> 18  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<400> 18  
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 tcctgtgcag cgtctggatt caccttcagt aaatatggca tgcactgggt ccgccaggct 120  
 ccaggcaagg ggctggagtg ggtggcagtt ttatgggtatg atggaagtaa taaatactat 180  
 gcagactccg tgaagggccg attcaccatc tccagag aca attccaagaa cagcgtgtat 240  
 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagggtccg 300  
 tactactttg actactgggg ccaggggaacc ctgggtcaccg tctcctcag 349

<210> 19  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 19  
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 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Tyr  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ala Val Leu Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys

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<210> 20
<211> 325
<212> DNA
<213> Homo sapiens
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cctggccagg  ctcccaggt  cctcatctat  ggtgcatcca  gcagggccac  tggcatccca  180
gacaggttca  ttggcagtg  gtctgggaca  gacttcactg  tcaccatcag  cagactggaa  240
ctcgaagatt  ttgcagtgta  ttactgtcag  cagtatggta  gttcaccgtg  gacgttcggc  300
caagggacca  aggtggaaat  caaac                                     325
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<210> 21
<211> 108
<212> PRT
<213> Homo sapiens
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<400> 21															
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Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Val	Ser	Ser	Ser
			20					25					30		
Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu
		35					40					45			
Ile	Tyr	Gly	Ala	Ser	Ser	Arg	Ala	Thr	Gly	Ile	Pro	Asp	Arg	Phe	Ser
	50					55					60				
Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Val	Thr	Ile	Ser	Arg	Leu	Glu
65					70					75					80
Pro	Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Gly	Ser	Ser	Pro
			85						90					95	
Trp	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys				
			100					105							

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<210> 22
<211> 322
<212> DNA
<213> Homo sapiens
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atcacttgtc gggcgagtcg gggattatgc agctggttag cctgggtatca gcagaaacca 120
gggaaagccc ctacgctcct aatctatgct gcatccagtt tgcaacgtgg ggtcccatca 180
aggttcagcg gcagtggaat tgggacagat ttcactctca ccatacgcag cctgcagcct 240
gaagattttg caacttactt ttgtcaacag gctaacagtt tccattcac tttcggccct 300
gggaccaaag tggatatcaa ac                                     322
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<210> 23
<211> 107
<212> PRT
<213> Homo .sapiens
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&lt;400&gt; 23

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
          20           25           30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Thr Leu Leu Ile
          35           40           45
Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly
          50           55           60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65           70           75           80
Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe
          85           90           95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
          100          105

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&lt;210&gt; 24

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 24

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gacatccaga tgaccaatc tccatcttcc gtgtctgcat ctgtaggaga cagagt ctcc 60
atcaattgtc gggcgagtca ggggtattagc agctgggttag cctgggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaacgtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttactt ttgtcaacag gctaa cagtt tcccattcac ttctggccct 300
gggaccaaag tggatatcaa ac 322

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&lt;210&gt; 25

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 25

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Trp
          20           25           30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
          35           40           45
Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly
          50           55           60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65           70           75           80
Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe
          85           90           95
Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
          100          105

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&lt;210&gt; 26

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 26



gacatccaga tgaccagtc tccatcttcc gtgtctacat ctgtaggaga cagagtctcc 60  
 atcacttgtc gggcgagtc ggggtattggc agctgggttag cctgggtatca gcagaaacca 120  
 gggcaagccc ctacgctcct aatctatgct gcatccagtt tgcaacgtgg gg tcccatca 180  
 agattcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240  
 gaagattttg caacttactt ttgtcaacag gctaacagtt tcccattcac tttcggccct 300  
 gggaccaaaag tggatgtcaa ac 322

<210> 27  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 27  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Thr Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Gly Ser Trp  
 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Thr Leu Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe  
 85 90 95  
 Thr Phe Gly Pro Gly Thr Lys Val Asp Val Lys  
 100 105

<210> 28  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 28  
 gacatccaga tgaccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtctcc 60  
 atcacttgtc gggcgagtc ggggtattggc agctgggttag cctgggtatca gcagaaacca 120  
 gggcaagccc ctacgctcct aatctatgct gcatccagtt tgcaacgtgg ggtcccatca 180  
 agattcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240  
 gaagattttg caacttactt ttgtcaacag gctaacagtt tcccattc ac tttcggccct 300  
 gggaccaaaag tggatgtcaa ac 322

<210> 29  
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 <212> PRT  
 <213> Homo sapiens

<400> 29  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Gly Ser Trp  
 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Thr Leu Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe

85 90 95  
 Thr Phe Gly Pro Gly Thr Lys Val Asp Val Lys  
 100 105

<210> 30  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<400> 30  
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 ccaggcaagg ggctggagtg ggtggcagtt atatggtttg atggaaataa taaattctat 180  
 gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240  
 ctgcaaatga acagcctgag agtcgaggac acggctgtgt attactgtgc gcgaggcggg 300  
 agctactggg actactgggg ccagggaacc ctgggtcacgc tctcctcag 349

<210> 31  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 31  
 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr  
 20 25 30  
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ala Val Ile Trp Phe Asp Gly Asn Asn Lys Phe Tyr Ala Asp Ser Val  
 50 55 60  
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr  
 65 70 75 80  
 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg Gly Gly Ser Tyr Trp Asp Tyr Trp Gly Gln Gly Thr Leu Val  
 100 105 110  
 Thr Val Ser Ser  
 115

<210> 32  
 <211> 336  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
 gatattgtga tgaccagac tccactcttc tcatttgtca tgattggaca gccggcctcc 60  
 atctcctgca ggtctaggca aagcctcgta cacagtgatg gaaacaccta cttgaattgg 120  
 cttcagcaga ggccaggcca gcctccaaga ctccctaattt ataagacttc taaccgggtc 180  
 tctgggggtcc cagatagatt cagtggcagt ggggcaggga cagatttcac actgaaaa tc 240  
 agcagggtgg aagctgagga tgtcgggggtt tattactgta tgcaagctac acaatttcct 300  
 atcacgttcg gccaaaggac acgactggag attaaa 336

<210> 33  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 33

```

Asp Ile Val Met Thr Gln Thr Pro Leu Phe Ser Phe Val Met Ile Gly
 1           5           10           15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Arg Gln Ser Leu Val His Ser
          20          25          30
Asp Gly Asn Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro
      35      40      45
Pro Arg Leu Leu Ile Tyr Lys Thr Ser Asn Arg Phe Ser Gly Val Pro
    50      55      60
Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65          70          75          80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
      85      90      95
Thr Gln Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
    100    105    110

```

&lt;210&gt; 34

&lt;211&gt; 370

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 34

```

caggtgcagc tgggtggagtc tggggggaggc gtgggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agctatggc a tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatcatatg atggaagtaa taaatactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaataa acagcctgag agttgaggac acggtgtgtg attactgtgc gaaagatcac 300
gggtgggaggt acgtcta cga ctacgggtatg gacgtctggg gccaaaggac cacggtcacc 360
gtctcctcag                                     370

```

&lt;210&gt; 35

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 35

```

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1           5           10           15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
      20      25      30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
    35    40    45
Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50    55    60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65          70          75          80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
      85      90      95
Ala Lys Asp His Gly Gly Arg Tyr Val Tyr Asp Tyr Gly Met Asp Val
    100    105    110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
    115    120

```

&lt;210&gt; 36

&lt;211&gt; 322

&lt;212&gt; DNA

<213> Homo sapiens

<400> 36

```
gacatccaga tgaccagtc tccatcttcc gtgtctgcat ctg taggaga cagagtctcc 60
atcacttgtc gggcgagtc ggggtattggc agctgggttag cctgggtatca gcagaaacca 120
gggcaagccc ctacgtctct aatctatgct gcctccagtt tgcaacgtgg ggtcccatca 180
agattcagcg gcagtggatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gaagattttg caacttactt tt gtcaacag gctaacagtt tcccattcac tttcggccct 300
gggaccaaag tggatgtcaa ac                                     322
```

<210> 37

<211> 107

<212> PRT

<213> Homo sapiens

<400> 37

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly Ile Gly Ser Trp
          20          25          30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Thr Leu Leu Ile
          35          40          45
Tyr Ala Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65          70          75          80
Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn Ser Phe Pro Phe
          85          90          95
Thr Phe Gly Pro Gly Thr Lys Val Asp Val Lys
          100          105
```

<210> 38

<211> 348

<212> DNA

<213> Homo sapiens

<400> 38

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caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctgggtgc ctccatcagt aattactact ggagctggat ccggcagccc 120
ccagggaagg gactggagtg gattgggtat gtctcttaca gtgggagtac gtactacaac 180
ccctccctca agggctcgagt caccatgtca gtagacacgt ccaagaacca gttctccctg 240
aagctgagct ctgtgaccgc tgcggacacg gccgtgtatt actgtgagag agaaaaactg 300
gggattggag actactgggg ccagggaacc ctggtcaccg tctcctca 348
```

<210> 39

<211> 116

<212> PRT

<213> Homo sapiens

<400> 39

```
Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1           5           10           15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala Ser Ile Ser Asn Tyr
          20          25          30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
          35          40          45
Gly Tyr Val Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys
          50          55          60
```

Gly Arg Val Thr Met Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu  
 65 70 75 80  
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala  
 85 90 95  
 Arg Glu Lys Leu Gly Ile Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val  
 100 105 110  
 Thr Val Ser Ser  
 115

<210> 40  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 40  
 gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc gggcaagtca gggcattaaa aatgatttag gctggtatca gcagaaacca 120  
 gggaaagccc ctaagcgctt gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa tt cactctca caatcagcag cctgcagcct 240  
 gaagattttg caacttatta ctgtctacag cataatagtt atccgtgcag ttttggccag 300  
 gggaccaagc tggagatcaa ac 322

<210> 41  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 41  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Lys Asn Asp  
 20 25 30  
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Cys  
 85 90 95  
 Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
 100 105

<210> 42  
 <211> 354  
 <212> DNA  
 <213> Homo sapiens

<400> 42  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcacagac cctgtccctc 60  
 acctgcactg tctctggtgc ctccatcagc agtgggtgctt actactggag ttggatccgc 120  
 cagcaccagc ggaagggcct ggagtggatt gggtagatct ataagagtga gacctcctac 180  
 tacaaccgct ccctcaagag tcgacttacc ctatcagtag acacgtctaa gaaccagttc 240  
 tccctgaacc tgatctctgt gactgccgcg gacacggcgg tgtattattg tgcgagagat 300  
 aaactgggga tcgcggaacta ctggggcc ag ggaaccctgg tcaccgtctc ctca 354

<210> 43

<211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 43  
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln  
 1 5 10 15  
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala Ser Ile Ser Ser Gly  
 20 25 30  
 Ala Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu  
 35 40 45  
 Trp Ile Gly Tyr Ile Tyr Lys Ser Glu Thr Ser Tyr Tyr Asn Pro Ser  
 50 55 60  
 Leu Lys Ser Arg Leu Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe  
 65 70 75 80  
 Ser Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr  
 85 90 95  
 Cys Ala Arg Asp Lys Leu Gly Ile Ala Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110  
 Leu Val Thr Val Ser Ser  
 115

<210> 44  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 44  
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120  
 gggaaagccc ctaagcgct gatctatg ct gcatccaatt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240  
 gaagattttg caacttatta ctgtctacag cataatagct accctccac tttcggcgga 300  
 gggaccaagg tggaaatcaa ac 322

<210> 45  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 45  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp  
 20 25 30  
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Pro  
 85 90 95  
 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
 100 105

<210> 46

<211> 349  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttc ggagac cctgtccctc 60  
 acctgcactg tctctggtgt ctccatcagt aattactact ggagctggat ccggcagtc 120  
 ccaggaagg gactggagtg gattggatat atctattaca gtgggagtc ctattacaac 180  
 ccctccctca agagtcgagt cactatatct gcagacacgt ccaagaacca attctccctg 240  
 aagctgagct ctgtgaccgc tgc ggacacg gccatttatt actgtgagag agaaaaactg 300  
 gggattggag actactgggg ccaggaacc ctggtcaccg tctctcag 349

<210> 47  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 47  
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
 1 5 10 15  
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val Ser Ile Ser Asn Tyr  
 20 25 30  
 Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile  
 35 40 45  
 Gly Tyr Ile Tyr Tyr Ser Gly Ser Pro Tyr Tyr Asn Pro Ser Leu Lys  
 50 55 60  
 Ser Arg Val Thr Ile Ser Ala Asp Thr Ser Lys Asn Gln Phe Ser Leu  
 65 70 75 80  
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Ile Tyr Tyr Cys Ala  
 85 90 95  
 Arg Glu Lys Leu Gly Ile Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val  
 100 105 110  
 Thr Val Ser Ser  
 115

<210> 48  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 48  
 gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtcggaga cagagtcacc 60  
 atcacttgcc gggcaagtca gggcattaga aatgattt ag gctggtatca gcagaaacca 120  
 gggaaagccc ctaagcgccct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240  
 gaagattttg caacttatta ctgtctacag cataatagtt accctccac tttcggccct 300  
 gggaccaagg tggata tcaa ac 322

<210> 49  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 49  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp  
 20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile  
           35                  40                  45  
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
           50                  55                  60  
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65                  70                  75                  80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Pro  
                   85                  90                  95  
 Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys  
                   100                  105

<210> 50  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<400> 50  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60  
 acctgcactg tctctggtgg ctccatcagt cgttactact ggagctggat ccggcagccc 120  
 ccagggaagg gactggagtg gattgggtat gtctcttaca gtgggagcac ctactacaac 180  
 ccctccctca agagtcgagt caccatatca gta gacacgt ccaagaacca gttctccctg 240  
 aagctgagct ctgtgaccgc tgcggacacg gccgtgtatt actgtgcgag agataaactg 300  
 gggattggag actactgggg ccagggaacc ctggtcaccg tctcctcag 349

<210> 51  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 51  
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu  
   1                  5                  10                  15  
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Arg Tyr  
           20                  25                  30  
 Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile  
           35                  40                  45  
 Gly Tyr Val Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys  
           50                  55                  60  
 Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu  
 65                  70                  75                  80  
 Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala  
                   85                  90                  95  
 Arg Asp Lys Leu Gly Ile Gly Asp Tyr Trp Gly Gln Gly Thr Leu Val  
           100                  105                  110  
 Thr Val Ser Ser  
           115

<210> 52  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 52  
 gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtagg aga cagagtcacc 60  
 atcaattgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaaccg 120  
 gggaaagccc ctaagcgcct gatctatgct gcacccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240



gaagattttg caacttatta ctgtct acag cataatagtt acccgtgcag ttttggccag 300  
 gggaccaagc tggagatcaa ac 322

<210> 53  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 53  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp  
 20 25 30  
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Cys  
 85 90 95  
 Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys  
 100 105

<210> 54  
 <211> 355  
 <212> DNA  
 <213> Homo sapiens

<400> 54  
 caggtgcagc tgcaggagtc gggcccagga ctggtgaagc ctttacagac cctgtccctc 60  
 acctgcactg tctctgggtg ctccatcagc agtgggtgtt actactggag ctggatccgc 120  
 cagcaccag ggaagggcct ggagtggatt gggtagatct ata acagtaa gacctcctat 180  
 tataatccgt cctcaagag tgcacttacc ctatcagtag acacgtctaa gaaccagttc 240  
 tccctgaacc tgatctctgt gactgccgcg gacacggcgc tgtattactg tgcgagagat 300  
 aaattgggga tcgcggacta ctggggccag ggaaccctgg tcaccgtctc ctcag 355

<210> 55  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 55  
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Leu Gln  
 1 5 10 15  
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly  
 20 25 30  
 Val Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu  
 35 40 45  
 Trp Ile Gly Tyr Ile Tyr Asn Ser Lys Thr Ser Tyr Tyr Asn Pro Ser  
 50 55 60  
 Leu Lys Ser Arg Leu Thr Leu Ser Val Asp Thr Ser Lys Asn Gln Phe  
 65 70 75 80  
 Ser Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr  
 85 90 95  
 Cys Ala Arg Asp Lys Leu Gly Ile Ala Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110  
 Leu Val Thr Val Ser Ser

115

<210> 56  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 56  
 gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60  
 atcacttgcc ggacaagtca gggcattaga aatgatttag gctgggtatca gcagaaacca 120  
 gggaaagccc ctaagcgctt gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180  
 aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240  
 gaagattttg caacttatta ctgtctacag cataatagct accctcccac tttcggcgga 300  
 gggaccaagg tgagatcaa ac 322

<210> 57  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 57  
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly  
 1 5 10 15  
 Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Gly Ile Arg Asn Asp  
 20 25 30  
 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile  
 35 40 45  
 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
 65 70 75 80  
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Pro  
 85 90 95  
 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
 100 105

<210> 58  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<400> 58  
 Gly Ala Ser Ile Ser Ser Tyr Tyr Trp Ser Tyr Ile Tyr Tyr Ser Gly  
 1 5 10 15  
 Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser Glu Arg Leu Gly Ile Gly  
 20 25 30  
 Asp Tyr

<210> 59  
 <211> 41  
 <212> PRT  
 <213> Homo sapiens

<400> 59  
 Gly Phe Thr Phe Ser Ser Tyr Gly Me t His Val Ile Ser Tyr Asp Gly

```

      1             5             10             15
Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Asp His Gly Gly Arg
      20             25             30
Tyr Val Tyr Asp Tyr Gly Met Asp Val
      35             40

```

```

<210> 60
<211> 34
<212> PRT
<213> Homo sapiens

```

```

<400> 60
Gly Phe Thr Phe Ser Lys Tyr Gly Met His Val Leu Trp Tyr Asp Gly
 1             5             10             15
Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Asp Gly His Tyr Phe
      20             25             30
Asp Tyr

```

```

<210> 61
<211> 34
<212> PRT
<213> Homo sapiens

```

```

<400> 61
Gly Phe Thr Phe Ser Ser Tyr Gly Met His Val Ile Trp Phe Asp Gly
 1             5             10             15
Asn Asn Lys Phe Tyr Ala Asp Ser Val Lys Gly Ala Pro Ala Tyr Trp
      20             25             30
Asp Tyr

```

```

<210> 62
<211> 27
<212> PRT
<213> Homo sapiens

```

```

<400> 62
Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu Gly Ala Ala Ser Ser Leu
 1             5             10             15
Gln Ser Leu Gln His Asn Thr Tyr Pro Pro Thr
      20             25

```

```

<210> 63
<211> 27
<212> PRT
<213> Homo sapiens

```

```

<400> 63
Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala Ala Ala Ser Thr Leu
 1             5             10             15
Gln Arg Gln Gln Ala Asn Ser Phe Pro Phe Thr
      20             25

```

<210> 64  
 <211> 29  
 <212> PRT  
 <213> Homo sapiens

<400> 64  
 Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Val Ala Leu Ala Ala Ser  
 1 5 10 15  
 Ser Leu Gln Arg Gln Gln Ala Asn Ser Phe Pro Phe Thr  
 20 25

<210> 65  
 <211> 27  
 <212> PRT  
 <213> Homo sapiens

<400> 65  
 Arg Ala Ser Gln Gly Ile Ser Ser Trp Leu Ala Ala Ala Ser Ser Leu  
 1 5 10 15  
 Gln Arg Gln Gln Ala Asn Ser Phe Pro Phe Thr  
 20 25

<210> 66  
 <211> 27  
 <212> PRT  
 <213> Homo sapiens

<400> 66  
 Arg Ala Ser Gln Gly Ile Gly Ser Trp Leu Ala Ala Ala Ser Ser Leu  
 1 5 10 15  
 Gln Arg Gln Gln Ala Asn Ser Phe Pro Phe Thr  
 20 25

<210> 67  
 <211> 32  
 <212> PRT  
 <213> Homo sapiens

<400> 67  
 Arg Ser Arg Gln Ser Leu Val His Ser Asp Gly Asn Thr Tyr Leu Asn  
 1 5 10 15  
 Lys Thr Ser Asn Arg Phe Ser Met Gln Ala Thr Gln Phe Pro Ile Thr  
 20 25 30

<210> 68  
 <211> 28  
 <212> PRT  
 <213> Homo sapiens

<400> 68  
 Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala Gly Ala Ser Ser  
 1 5 10 15  
 Arg Ala Thr Gln Gln Tyr Gly Ser Ser Pro Trp Thr  
 20 25

<210> 69  
 <211> 1990  
 <212> DNA  
 <213> Homo sapiens

<400> 69  
 atgaagcatc tgtggttctt ccttctccta gtggcagctc ccagatgggt cctgtcccag 60  
 gtgcagctgc aggagtcggg cccaggactg gtgaagcctt cggagaccct gtccctcacc 120  
 tgcactgtct ctggtgcctc catcagtagt tactactgga gctggatccg gcagcccca 180  
 gggaagggac tggagtggat tgggtatata tattacagtg ggagcaccaa ctacaacccc 240  
 tccctcaaga gtcgagtca c catatcagta gacacgtcca agaaccagtt ctccctgaag 300  
 ctgaggtctg tgaccgctgc ggacacggcc gtgtattact gtgcgagaga gcgactgggg 360  
 atcggggact actggggcca aggaaccctg gtcaccgtct cctcagcctc caccaagggc 420  
 ccatcggtct tccccctggc gccctgctct agaagcacct ccgagagcac agccgccttg 480  
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 ctgaccagcg gcgtgcacac cttcccagct gtcctacagt cctcaggact ctactccctc 600  
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 cttctcttac agcaagctca ccgtggacaa gagcaggtgg cagcagggga acgtcttctc 1920  
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 tccgggtaaa 1990

<210> 70  
 <211> 1990  
 <212> DNA  
 <213> Homo sapiens

<400> 70  
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 gtagaggaag aaggagccgt cggagtcag catgggaggt gtggtcttgt agttgttctc 180  
 cggctgcccc ttgctctccc actccacggc gatgtcgtg gggtagaagc ctttgaccag 240  
 gcaggtcagg ctgacctggt tcttggtcat ctctcccg gatgggggca ggggtgtacac 300  
 ctgtggttct cggggtgcc ctgtagggac agaggttggc acagcggtc a ctcccagggc 360  
 agaggggtgg ccgagccggc ctctgtccat gtggccctca taccgcgg gtcccacctt 420  
 tggttttgga gatggtttt tcatggggg ctgggaggcc tttgttgag accttgact 480  
 tgtactcctt gccgttcagc cagtcctggt gcacaacggt gaggacgctg accacagga 540  
 acgtgctgtt gaactgctcc tcccgtg gct ttgtcttggt attatgcacc tccacgccgt 600  
 ccacgtacca gttgaactgg acctcggggt cttcgtggct cacgtccacc accacgcagc 660

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gctggggcct gtccctggat gcaggctact ctagggcacc tgtccgcct tgagctggag 840
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gcagagagaa gattgggagt tactcggatc tgggaggaga gaaggtgtcc gagctgaggg 960
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gtcccttccc tgggggctgc cggatccagc tccagtagta actactgatg gaggcaccag 1860
agacagtga ggtgaggac agggctctcc aaggcttcac cagtcctggg cccgactcct 1920
gcagctgcac ctgggacagg acccatctgg gagctgccac taggagaagg aagaaccaca 1980
gatgcttcat                                     1990

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<210> 71
<211> 241
<212> PRT
<213> Homo sapiens

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<400> 71
Met Lys His Leu Trp Phe Phe Leu Leu Leu Val Ala Leu Ala Ala Pro
 1          5          10          15
Arg Trp Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
          20          25          30
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala
          35          40          45
Ser Ile Ser Ser Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
          50          55          60
Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr
65          70          75          80
Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Ala Ser Pro Thr
          85          90          95
Ser Lys Asn Gln Phe Ser Leu Lys Leu Arg Ser Val Thr Ala Ala Asp
          100          105          110
Thr Ala Val Tyr Tyr Cys Ala Arg Glu Arg Leu Gly Ile Gly Asp Tyr
          115          120          125
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
          130          135          140
Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145          150          155          160
Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
          165          170          175
Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
          180          185          190
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
          195          200          205
Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val
          210          215          2 20
Ala Ser Pro His Lys Pro Ser Asn Thr Lys Val Ala Ser Pro Lys Thr

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230

235

240

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<210> 72
<211> 12
<212> PRT
<213> Homo sapiens
```

<400> 72  
Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro  
1 5 10

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<210> 73
<211> 115
<212> PRT
<213> Homo sapiens
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[illegible]

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<210> 74
<211> 107
<212> PRT
<213> Homo sapiens
```

```

<400> 74
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 1          5          10          15
Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys L eu Val Lys Gly Phe
          20          25          30
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
          35          40          45
Asn Asn Tyr Lys Thr Thr Pro Met Leu Asp Ser Asp Gly Ser Phe
          50          55          60
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
65          70          75          80
Asn Val Phe Ser Cys Ser Val Met His Glu A la Leu His Asn His Tyr
          85          90          95
Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
          100          105

```

<210> 75  
 <211> 310  
 <212> PRT  
 <213> Homo sapiens

<400> 75  
 Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 1 5 10 15  
 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
 20 25 30  
 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 35 40 45  
 Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr  
 50 55 60  
 Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys  
 65 70 75 80  
 Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro  
 85 90 95  
 Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
 100 105 110  
 Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
 115 120 125  
 Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
 130 135 140  
 Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
 145 150 155 160  
 Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp  
 165 170 175  
 Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
 180 185 190  
 Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu  
 195 200 205  
 Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn  
 210 215 220  
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
 225 230 235 240  
 Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
 245 250 255  
 Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys  
 260 265 270  
 Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys  
 275 280 285  
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
 290 295 300  
 Ser Leu Ser Pro Gly Lys  
 305 310

<210> 76  
 <211> 552  
 <212> DNA  
 <213> Homo sapiens

<400> 76  
 atgagggtcc ccgctcagct cctggggctc ctgctgctct ggttcccagg tgccagggtgt 60  
 aagcttgaca tccagctgac ccaatctcca tctccctgt ctgcatctgt aggagacaga 120  
 gtcacatca cttgccgggc aagtcagggc attagaaatg atttaggctg gtatcagcag 180



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aaaccagggga aagcccctaa ggcgcctgac tatgctgcat ccagtttgca aagtgggggc 240
ccatcaaggt tcagcggcag tggatctggg acagaattca ctctcacaat cagcagcctg 300
cagcctgaag attttgcaac ttattactgt ctacagcata atacttacc tccgacgttc 360
ggccaagggga ccaaggtgga aatcaaacga actgtggctg caccatctgt cttcatcttc 420
ccgccatctg atgagcagtt gaaatctgga actgctagc g ttgtgtgcct gctgaataac 480
ttctatccca gagaggcaa agtacagtgg aaggtggata acgccctcca atcgggtaac 540
tcccaggaga gt 552

```

<210> 77  
 <211> 552  
 <212> DNA  
 <213> Homo sapiens

```

<400> 77
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tctgggatag aagttattca gcaggcacac aacgctagca gttccagatt tcaactgctc 120
atcagatggc gggaagatga agacagatgg tgcagccaca gttcgtttga tttccacctt 180
gggcccttgg ccgaacgtcg gagggtaagt attatgctgt agacagtaat aagttgcaaa 240
atcttcaggc tgcaggctgc tgattgtgag agtgaattct gtcccagatc cactgccgct 300
gaaccttgat gggacccac tttgcaaact ggatgcagca tagatcaggc gcttaggggc 360
tttccctggg ttctgctgat accagcctaa atcatttcta atgccctgac ttgcccggca 420
agtgatggg actctgtctc ctacagatgc agacaggag gatggaga tt gggtcagctg 480
gatgtcaagc ttacacctgg cacctgggaa ccagagcagc aggagcccca ggagctgagc 540
ggggaccctc at 552

```

<210> 78  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

```

<400> 78
Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp Phe Pro
1      5      10      15
Gly Ala Arg Cys Lys Leu Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser
20     25     30
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
35     40     45
Gln Gly Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys
50     55     60
Ala Pro Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val
65     70     75     80
Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr
85     90     95
Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln
100    105    110
His Asn Thr Tyr Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
115    120    125
Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
130    135    140
Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
145    150    155    160
Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
165    170    175
Gln Ser Gly Asn Ser Gln Glu Ser
180

```

<210> 79  
 <211> 31

<212> PRT  
 <213> Homo sapiens

<400> 79  
 Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln  
           1                  5                  10                  15  
 Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser  
                   20                  25                  30

<210> 80  
 <211> 2011  
 <212> DNA  
 <213> Homo sapiens

<400> 80  
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 tgtgtagcct ctggattcac cttcagtagc tatggcatgc actgggtccg ccagggtcca 180  
 ggcaaggggc tggagtgggt gg cagttata tcatatgatg gaagtaataa atactatgca 240  
 gactccgtga agggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg 300  
 caaatgaaca gcctgagagt tgaggacacg gctgtgtatt actgtgagag agatcacggg 360  
 gggagggtacg tctacgacta cggtatggac gtctggggcc aagggaccac ggtcaccgtc 420  
 tcctcagcct ccaccaaggg cccatcggtc tccccctgg cgccctgctc tagaagcacc 480  
 tccgagagca cagccgccct gggctgcctg gtcaaggact acttccccga accgggtgacg 540  
 gtgtcgtgga actcaggcgc tctgaccagc ggcgtgcaca ccttcccagc tgtcctacag 600  
 tcctcaggac tctactccct cagcagcgtg gtgaccgtgc cc tccagcaa cttcggcacc 660  
 cagacctaca cctgcaacgt agatcacaag cccagcaaca ccaagggtgga caagacagtt 720  
 ggtgagaggc cagctcaggg agggaggggtg tctgctggaa gccaggctca gccctcctgc 780  
 ctggacgcac cccggtctgt cagccccagc ccagggcagc aaggcaggcc ccattctgtc 840  
 cctcaccggg aggcctctgc ccgccccact catgctcagg gagaggggtc tctggtttt 900  
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 caccaggact ggctgaacgg caaggagtac aagtgaagg tctccaacaa aggcctccca 1560  
 gcccccatcg agaaaaccat ctccaaaacc aaagggtggga cccgcggggg atgagggcca 1620  
 catggacaga ggcgggctcg gccaccctc tgccctggga gtgaccgctg tgccaacctc 1680  
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 cgccgtggag tgggagagca atgggcagcc ggagaacaac tacaagacca cacctcccat 1860  
 gctggactcc gacggctcct tcttctctca cagcaagctc accgtggaca agagcagggtg 1920  
 gcagcagggg aacgtcttct catg ctccgt gatgcatgag gctctgcaca accactacac 1980  
 gcagaagagc ctctccctgt ctccgggtaa a 2011

<210> 81  
 <211> 2011  
 <212> DNA  
 <213> Homo sapiens

<400> 81  
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 cacggagcat gagaagacgt tccccgtg ccacctgtct ttgtccacgg tgagcttgct 120

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gtagaggaag aaggagccgt cggagtcag catgggaggt gtggtcttgt agttgttctc 180
cggtgcccc ttgctctccc actccacggc gatgtcgtg gggtagaagc ctttgaccag 240
gcaggtcagg ctgacctggg tcttggtcat ctccctccgg gatgggggca gg gtgtacac 300
ctgtggttct cggggctgcc ctgtagggac agaggttggc acagcgggca ctccagggc 360
agaggggtggg ccgagccggc ctctgtccat gtggccctca taccctcgcg gtccacctt 420
tggttttgga gatggttttc tcgatggggg ctgggaggcc tttgttgag accttgact 480
tgtactcctt gccgttcagc cagtcctggt gcacaacggg gaggacgctg accacacgga 540
acgtgctgtt gaactgctcc tcccgtggct ttgtcttggc attatgcacc tccacgccgt 600
ccacgtacca gttgaactgg acctcggggg ctctcgtggc cagctccacc accacgcacg 660
tgacctcagg ggtccgggag atcatgaggg tgtccttggg ttttgggggg aagaggaaga 720
ctgacggctc tgccacaggt ggtgctgagg aagagatgga ggtggacgtg tcagcaccca 780
gctggggcct gtccctggat gcaggctact ctagggcacc tgtcccgct tgagctggag 840
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gagtggggcg ggcagaggcc tccggg tgag gagacagatg gggcctgcct tgctgccctg 1200
ggctggggct gcacagccgg ggtgcgtcca ggcaggaggg ctgagcctgg cttccagcag 1260
acacctccc tccctgagct ggctctcac caactgtctt gtccaccttg gtgttctgg 1320
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agaccgatgg gcccttggtg gaggtgagg agacgggtgac cgtggtccct tggccccaga 1620
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tggagatggt gaatcggcc ttcacggagt ctgcatagta tttattactt ccatcatatg 1800
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agctactgaa ggtgaatcca gaggtacac aggagagtct caggacctc ccaggctgga 1920
ccacgcctcc cccagactcc accagctgca cctgacactg gacacctctt aaaagagcaa 1980
cgaggaaaac ccagcggagc cccaattcca t 2011

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<210> 82  
 <211> 252  
 <212> PRT  
 <213> Homo sapiens

```

<400> 82
Met Glu Leu Gly Leu Arg Trp Val Phe Leu Val Ala Leu Ala Leu Leu
 1          5          10          15
Arg Gly Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val
 20          25          30
Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Val Ala Leu Ala Ser
 35          40          45
Gly Phe Thr Phe Ser Ser Tyr Gly Met His Trp Val Ala A rg Gly Gln
 50          55          60
Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ala Val Ile Ser Tyr
 65          70          75          80
Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
 85          90          95
Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser
100          105          110
Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys Ala A rg Asp His Gly
115          120          125
Gly Arg Tyr Val Tyr Asp Tyr Gly Met Asp Val Trp Gly Gln Gly Thr
130          135          140
Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
145          150          155          160

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Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
                165                170                175
Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val T hr Val Ser Trp Asn
                180                185                190
Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                195                200                205
Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
                210                215                220
Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Ala Ser Pro His Lys
225                230                235                240
Pro Ser Asn Thr Lys Val Ala Ser Pro Lys T hr Val
                245                250

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<210> 83
<211> 752
<212> DNA
<213> Homo sapiens

```

```

<400> 83
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ctgagctcgc ccgtcacaaa gagcttcaac aggggaagtg ggtagtcccg gactcagcgc 720
ggcagtgttt ctggaagttg tcccctgagt gt 752

```

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<210> 84
<211> 752
<212> DNA
<213> Homo sapiens

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<400> 84
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```

```

<210> 85
<211> 234
<212> PRT
<213> Homo sapiens

```

&lt;400&gt; 85

```

Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp Phe Pro
 1           5           10           15
Gly Ser Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser
          20           25           30
Ala Ser Ile Gly Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Gly
          35           40           45
Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
          50           55           60
Thr Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Arg Gly Val Pro Ser
65           70           75           80
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
          85           90           95
Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asn
          100          105          110
Ser Phe Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
          115          120          125
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
          130          135          140
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
145          150          155          160
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
          165          170          175
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
          180          185          190
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
          195          200          205
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
          210          215          220
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225          230

```

&lt;210&gt; 86

&lt;211&gt; 1990

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 86

```

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```

```

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```

&lt;210&gt; 87

&lt;211&gt; 1990

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 87

```

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```

&lt;210&gt; 88

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 88

```

Met Lys His Leu Trp Phe Phe Leu Leu Leu Val Ala Leu Ala Ala Pro
 1           5           10           15
Arg Trp Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
          20           25           30
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala
          35           40           45
Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys
          50           55           60
Gly Leu Glu Trp Ile Gly Tyr Val Ser Tyr Ser Gly Ser Thr Tyr Tyr
65           70           75           80
Asn Pro Ser Leu Lys Gly Arg Val Thr Met Ser Val Ala Ser Pro Thr
          85           90           95
Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp
          100          105          110
Thr Ala Val Tyr Tyr Cys Ala Arg Glu Lys Leu Gly Ile Gly Asp Tyr
          115          120          125
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
          130          135          140
Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145          150          155          160
Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
          165          170          175
Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
          180          185          190
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
          195          200          205
Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val
          210          215          220
Ala Ser Pro His Lys Pro Ser Asn Thr Lys Val Ala Ser Pro Lys Thr
225          230          235          240
Val

```

&lt;210&gt; 89

&lt;211&gt; 702

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 89

```

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ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 702

```

&lt;210&gt; 90

&lt;211&gt; 702

&lt;212&gt; DNA

<213> Homo sapiens

<400> 90

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agatgcagac agggaggatg gagactgg gt catctggatg tcacacctgg cacctgggaa 660
ccagagcagc aggagcccca ggagctgagc ggggagcctc at 702

```

<210> 91

<211> 234

<212> PRT

<213> Homo sapiens

<400> 91

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Met Arg Leu Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp Phe Pro
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Gly Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
 20          25          30
Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
 35          40          45
Ile Lys Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
 50          55          60
Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
 65          70          75          80
Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
 85          90          95
Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn
100          105          110
Ser Tyr Pro Cys Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
115          120          125
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
130          135          140
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
145          150          155          160
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
165          170          175
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
180          185          190
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
195          200          205
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
210          215          220
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225          230

```

<210> 92

<211> 1996

<212> DNA

<213> Homo sapiens



&lt;400&gt; 92

```

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```

1996

&lt;210&gt; 93

&lt;211&gt; 1996

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 93

```

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&lt;210&gt; 94

&lt;211&gt; 243

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 94

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Met Lys His Leu Trp Phe Phe Leu Leu Leu Val Ala Leu Ala Ala Pro
 1          5          10          15
Arg Trp Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
 20          25          30
Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Ala
 35          40          45
Ser Ile Ser Ser Gly Ala Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro
 50          55          60
Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Lys Ser Glu Thr Ser
 65          70          75          80
Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Leu Thr Leu Ser Val Ala Ser
 85          90          95
Pro Thr Ser Lys Asn Gln Phe Ser Leu Asn Leu Ile Ser Val Thr Ala
100          105          110
Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Lys Leu Gly Ile Ala
115          120          125
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
130          135          140
Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser
145          150          155          160
Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
165          170          175
Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
180          185          190
Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
195          200          205
Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys
210          215          220
Asn Val Ala Ser Pro His Lys Pro Ser Asn Thr Lys Val Ala Ser Pro
225          230          235          240
Lys Thr Val

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&lt;210&gt; 95

<211> 702  
 <212> DNA  
 <213> Homo sapiens

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<210> 96  
 <211> 702  
 <212> DNA  
 <213> Homo sapiens

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<210> 97  
 <211> 234  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 35 40 45  
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 50 55 60  
 Lys Arg Leu Ile Tyr Ala Ser Asn Leu Gln Ser Gly Val Pro Ser  
 65 70 75 80  
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser  
 85 90 95  
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn  
 100 105 110  
 Ser Tyr Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg  
 115 120 125

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln  
 130 135 140  
 Leu Lys Ser Gly Thr Ala S Ser Val Val Cys Leu Leu Asn Asn Phe Tyr  
 145 150 155 160  
 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser  
 165 170 175  
 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr  
 180 185 190  
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys  
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<210> 98  
 <211> 1990  
 <212> DNA  
 <213> Homo sapiens

<400> 98  
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<210> 99  
 <211> 1990

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 99

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&lt;210&gt; 100

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 100

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Met Lys His Leu Trp Phe Phe Leu Leu Leu Val Ala Leu Ala Ala Pro
 1          5          10          15
Arg Trp Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
 20          25          30
Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Val
 35          40          45
Ser Ile Ser Asn Tyr Tyr Trp Ser Trp Ile Arg Gln Ser Pro Gly Lys
 50          55          60
Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Pro Tyr Tyr
 65          70          75          80
Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Ala Asp Thr Ser Lys
 85          90          95
Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala
100          105          110

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Ile	Tyr	Tyr	Cys	Ala	Arg	Glu	Lys	Leu	Gly	Ile	Gly	Asp	Tyr	Trp	Gly
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Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser
	130					135					140				
Val	Phe	Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	Thr	Ala
145					150					155					160
Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val
			165						170					175	
Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala
		180						185					190		
Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val
	195						200					205			
Pro	Ser	Ser	Asn	Phe	Gly	Thr	Gln	Thr	Tyr	Thr	Cys	Asn	Val	Ala	Ser
	210					215					220				
Pro	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Ala	Ser	Pro	Lys	Thr	Val	
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 <211> 702  
 <212> DNA  
 <213> Homo sapiens

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<210> 102  
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 <212> DNA  
 <213> Homo sapiens

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<210> 103  
 <211> 234  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 103

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Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Trp Phe Pro
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Gly Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
          20           25           30
Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
          35           40           45
Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
          50           55           60
Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
          65           70           75           80
Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser
          85           90           95
Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn
          100          105          110
Ser Tyr Pro Pro Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
          115          120          125
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
          130          135          140
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
          145          150          155          160
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
          165          170          175
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
          180          185          190
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
          195          200          205
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
          210          215          220
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
          225          230

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&lt;210&gt; 104

&lt;211&gt; 1990

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 104

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<210> 105

<211> 1990

<212> DNA

<213> Homo sapiens

<400> 105

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<210> 106



<211> 241  
 <212> PRT  
 <213> Homo sapiens

<400> 106  
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 20 25 30  
 Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr V al Ser Gly Gly  
 35 40 45  
 Ser Ile Ser Arg Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys  
 50 55 60  
 Gly Leu Glu Trp Ile Gly Tyr Val Ser Tyr Ser Gly Ser Thr Tyr Tyr  
 65 70 75 80  
 Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Ala Ser Pro Thr  
 85 90 95  
 Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser V al Thr Ala Ala Asp  
 100 105 110  
 Thr Ala Val Tyr Tyr Cys Ala Arg Asp Lys Leu Gly Ile Gly Asp Tyr  
 115 120 125  
 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly  
 130 135 140  
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser  
 145 150 155 160  
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp T yr Phe Pro Glu Pro Val  
 165 170 175  
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe  
 180 185 190  
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val  
 195 200 205  
 Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val  
 210 215 220  
 Ala Ser Pro His Lys Pro Ser Asn Thr L ys Val Ala Ser Pro Lys Thr  
 225 230 235 240  
 Val

<210> 107  
 <211> 702  
 <212> DNA  
 <213> Homo sapiens

<400> 107  
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 gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 240  
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 gaagattttg caacttatta ctgtctacag cataatagtt acccgtgcag ttttggccag 360  
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 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 600  
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 660  
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<210> 108

<211> 702  
 <212> DNA  
 <213> Homo sapiens

<400> 108  
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<210> 109  
 <211> 234  
 <212> PRT  
 <213> Homo sapiens

<400> 109  
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 20 25 30  
 Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly  
 35 40 45  
 Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro  
 50 55 60  
 Lys Arg Leu Ile Tyr Ala Ser Ser Leu Gln Ser Gly Val Pro Ser  
 65 70 75 80  
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser  
 85 90 95  
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn  
 100 105 110  
 Ser Tyr Pro Cys Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg  
 115 120 125  
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln  
 130 135 140  
 Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr  
 145 150 155 160  
 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser  
 165 170 175  
 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr  
 180 185 190  
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys  
 195 200 205  
 His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro  
 210 215 220  
 Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
 225 230

<210> 110  
 <211> 1996  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 110

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tgcactgtct ctggtggctc catcagcagt ggtgtttact actggagctg gatccgccag 180
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&lt;210&gt; 111

&lt;211&gt; 1996

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 111

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<210> 112

<211> 235

<212> PRT

<213> homo sapiens

<400> 112

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      20           25           30
Pro Leu Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile
      35           40           45
Ser Ser Gly Val Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys
      50           55           60
Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Asn Ser Lys Thr Ser Tyr Tyr
      65           70           75           80
Asn Pro Ser Leu Lys Ser Arg Leu Thr Leu Ser Val Asp Thr Ser Lys
      85           90           95
Asn Gln Phe Ser Leu Asn Leu Ile Ser Val Thr Ala Ala Asp Thr Ala
      100          105          110
Val Tyr Tyr Cys Ala Arg Asp Lys Leu Gly Ile Ala Asp Tyr Trp Gly
      115          120          125
Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
      130          135          140
Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
      145          150          155          160
Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
      165          170          175
Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
      180          185          190
Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
      195          200          205
Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
      210          215          220
Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val
      225          230          235

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<210> 113

<211> 702  
 <212> DNA  
 <213> Homo sapiens

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 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 702

<210> 114  
 <211> 702  
 <212> DNA  
 <213> Homo sapiens

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<210> 115  
 <211> 234  
 <212> PRT  
 <213> Homo sapiens

<400> 115  
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 20 25 30  
 Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Gly  
 35 40 45  
 Ile Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro  
 50 55 60  
 Lys Arg Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser  
 65 70 75 80  
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser  
 85 90 95  
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn  
 100 105 110  
 Ser Tyr Pro Pro Thr Phe Gly Gly Thr Lys Val Glu Ile Lys Arg  
 115 120 125

Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	
						130					135					140
Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	
						145					150					155
Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	
						165					170					175
Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	
						180					185					190
Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	
						195					200					205
His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	
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Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys							
						225					230					